

**METHOD AND APPARATUS FOR IMPROVING RESOLUTION
IN SPECTROMETERS PROCESSING OUTPUT STEPS FROM
NON-IDEAL SIGNAL SOURCES**

ABSTRACT OF THE DISCLOSURE

5 A method and apparatus for processing step-like output signals (primary
signals) generated by non-ideal, for example, nominally single-pole ("N-1P ") devices. An
exemplary method includes creating a set of secondary signals by directing the primary signal
along a plurality of signal paths to a signal summation point, summing the secondary signals
reaching the signal summation point after propagating along the signal paths to provide a
10 summed signal, performing a filtering or delaying operation in at least one of said signal
paths so that the secondary signals reaching said summing point have a defined time
correlation with respect to one another, applying a set of weighting coefficients to the
secondary signals propagating along said signal paths, and performing a capturing operation
after any filtering or delaying operations so as to provide a weighted signal sum value as a
15 measure of the integrated area Q_{gT} of the input signal.

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